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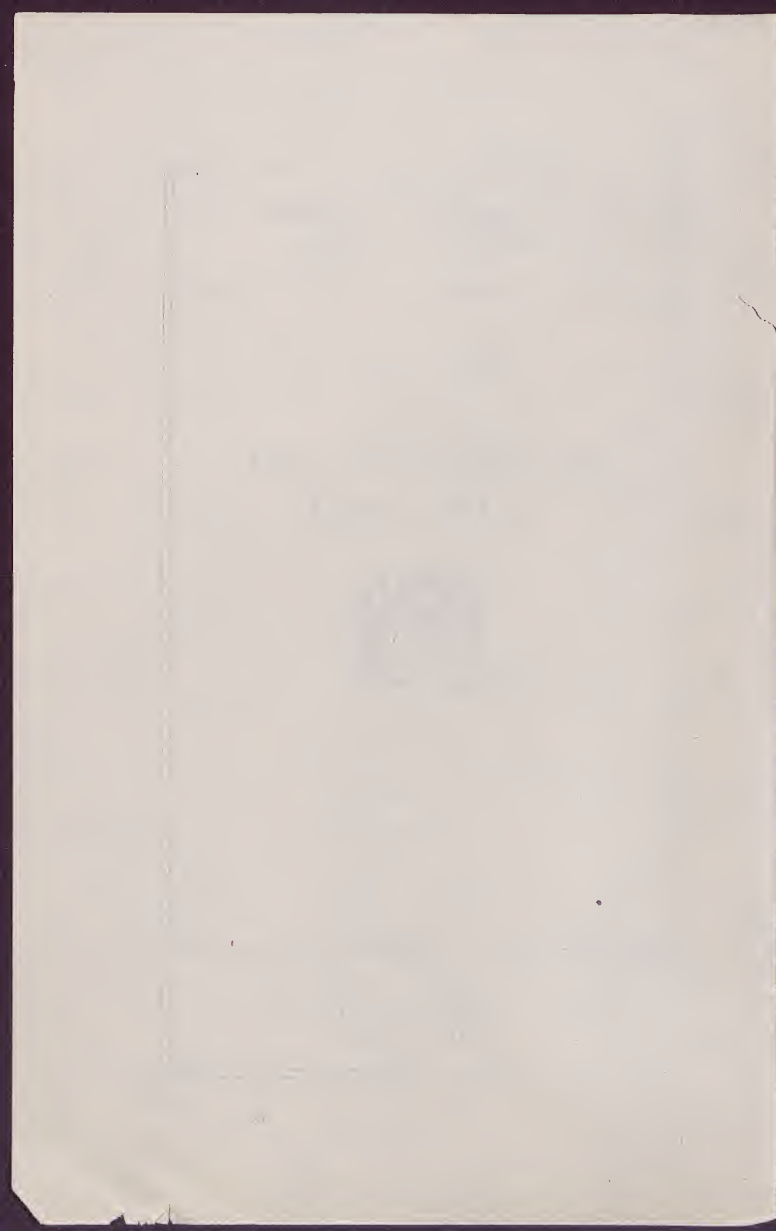
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PRIMITIVE AGRICULTURE
OF THE INDIANS



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Primitive Agriculture of the Indians

Excerpt from The Handbook of American Indians
Bulletin 30, Bureau of American Ethnology.



AN OPINION LONG prevailed in the minds of the people that the Indians north of Mexico were, previous to and at the time Europeans began to settle that part of the continent, virtually nomads, having no fixed abodes, and hence practising agriculture to a very limited extent.

Why this opinion has been entertained by the masses, who have learned it from tales and traditions of Indian life and warfare as they have been since the establishment of European colonies, can be readily understood, but why writers who have had access to the older records, should thus speak of them is not easily explained, when these records speaking of the temperate regions, almost without exception notice the fact that the Indians were generally found, from the border of the western plains to the Atlantic, dwelling in settled villages and cultivating the soil. DeSoto found all the tribes that he visited, from the Florida peninsula to the western part of Arkansas, cultivating maize and various other food plants. The early voyagers found the same thing true along the Atlantic from Florida to Massachusetts. Capt. John Smith and his Jamestown colony, indeed all the early colonies, depended at first very largely for subsistence on the products of Indian cultivation. Jacques Cartier, the first European who ascended the St. Lawrence, found the Indians of Hochelaga (Montreal island) cultivating the soil. "They have," he remarks, "good and large fields of corn." Champlain and other early French explorers testify to the large reliance of the Iroquois on the cultivation of the soil for subsistence. LaSalle and his companions observed the Indians of Illinois, and thence southward along the Mississippi, cultivating and to a large extent subsisting on maize.

Sagard, an eye-witness of what he reports, says, in speaking of the agriculture of the Hurons in 1623-26, that they dug a round place at every 2 feet or less, where they planted in the month of May in each hole nine or ten grains of corn which they had previously selected, culled, and soaked for several days in water. And every year they

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thus planted their corn in the same places and spots which they renovated with their small wooden shovels. He indicates the height of the corn by the statement that he lost his way quicker in these fields than in the prairies or forests (*Histoire du Canada*, I, 265-266, 1636, reprint, 1866).

Indian corn, the great American cereal, "was found in cultivation from the southern extremity of Chile to the 50th parallel of North latitude" (Brinton, *Myths of the New World*, 22, 1868). "All the nations who inhabit from the sea as far as the Illinois, and even farther, carefully cultivate the maize corn, which they make their principal subsistence" (Du Pratz, *Histoire de la Louisiane*, II, 239, 1763)." The whole of the tribes situated in the Mississippi valley, in Ohio, and the lakes reaching on both sides of the Alleghenies, quite to Massachusetts and other parts of New England, cultivated Indian corn. It was the staple product" (Schoolcraft, *Indian Tribes*, I, 80, 1851).

The great length of the period previous to the discovery during which maize had been in cultivation is proved by its differentiation into varieties, of which there were four in Virginia; by the fact that charred corn and impressions of corn on burnt clay have been found in the mounds and in the ruins of prehistoric pueblos in the Southwest; by the Delaware tradition and by the fact that the builders of the oldest mounds must have been tillers of the soil.

Some idea of the extent of the cultivation of maize by some of the tribes may be gained from the following estimates. The amount of corn (probably in the ear) of the Iroquois destroyed by Deronville in 1687 was estimated at 1,000,000 bushels (Charlevoix, *Histoire Nouvelle France*, II, 355, 1744; also *Documentary History New York*, I, 238, 1849). According to Tonti, who accompanied the expedition, they were engaged seven days in cutting up the corn of four villages. Gen. Sullivan, in his expedition into the Iroquois country, destroyed 160,000 bushels of corn and cut down the Indian orchards; in one orchard alone 1,500 apple trees were destroyed (*History New York During the Revolutionary War*, II, 334, 1879). Gen. Wayne, writing from Grand Glaize in 1794, says: "The margins of these beautiful rivers—the Miami of the Lake and the Au Glaize— appear like one continuous village for a number of miles, both above and below this place; nor have I ever before beheld such immense fields of corn in any part of America from Canada to Florida" (*Manypenny, Indian Wars*, 84, 1880).

If we are indebted to the Indians for maize, without which the peopling of America would probably have been delayed for a century, it is also from them that the whites learned the methods of planting, storing and using it. The ordinary corncribs, set on posts, are copies of those in use among the Indians, which Lawson described in 1701 (*History Carolina*, 35, reprint, 1860).

Beans, squashes, pumpkins, sweet potatoes, tobacco, gourds, and

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the sunflower were also cultivated to some extent, especially in what are now the Southern States. According to Beverly (*History Virginia*, 125-128, 1722), the Indians had two varieties of sweet potatoes. Marquette, speaking of the Illinois Indians, says that in addition to maize, "they also sow beans and melons, which are excellent, especially those with a red seed. Their squashes are not of the best; they dry them in the sun to eat in the winter and spring" (*Voy. and Discov.*, in French, *Historical Collections, Louisiana*, IV, 33, 1852).

The foregoing applies chiefly to the region east of the Rocky Mountains but the native population of the section now embraced in New Mexico and Arizona not only cultivated the soil, but relied on agriculture to a large extent for subsistence. No corn was raised or agriculture practised anywhere on the Pacific slope north of the lower Rio Colorado, but frequent mention is made by the chroniclers of Coronado's Expedition to New Mexico of the general cultivation of maize by the Indians of that section, and also of the cultivation of cotton. It is stated in the *Relacion del Suceso* (Winship in 14th Report, Bureau of American Ethnology, 575, 1896) that those who lived near the Rio Grande raised cotton but the others did not. The writer, speaking of the Rio Grande Valley, adds: "There is much corn here."

"From the earliest information we have of these nations [the Pueblo Indians] they are known to have been tillers of the soil, and though the implements used and their methods of cultivation were both simple and primitive, cotton, corn, wheat [after its introductions], beans, with many varieties of fruits were raised in abundance" (Baneroff, *Native Races*, I, 538, 1882). Chile and onions are extensively cultivated by the Pueblo tribes, as also are grapes and peaches but these latter, like wheat, were introduced by the Spaniards.

The Indians of New Mexico and Arizona had learned the art of irrigating their fields before the appearance of the white man on the continent. This is shown not only by the statements of early explorers, but by the still existing remains of their ditches. "In the valleys of the Salado and Gila, in southern Arizona, however, casual observation is sufficient to demonstrate that the ancient inhabitants engaged in agriculture by artificial irrigation to a vast extent.***Judging from the remains of extensive ancient works of irrigation, many of which may still be seen passing through tracts cultivated to-day as well as across densely wooded stretches considerably beyond the present non-irrigated area, it is safe to say that the principal canals constructed and used by the ancient inhabitants of the Salado valley controlled the irrigation of at least 250,000 acres" (Hodge in *American Anthropology*, July, 1893). Remains of ancient irrigating ditches and canals are also found elsewhere in these territories.

The sunflower was cultivated to a limited extent both by the Indians of the Atlantic slope and those of the Pueblo region for its seeds, which were eaten after being parched and ground into meal between two stones. The limits of the cultivation of tobacco at the time

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of the discovery has not yet been well defined. That it was cultivated to some extent on the Atlantic side is known; it was used aboriginally all over California, and indeed a plant called tobacco by the natives was cultivated as far North as Yakutat bay, Alaska.

Although it has been stated the Indians did not use fertilizers, there is evidence that they did. The Plymouth colonists were told by the Indians to add fish to the old grounds (Bradford, History Plymouth Plantation, Massachusetts Historical Society Collections, 4th series, III, 100, 1856). It is also stated that the Iroquois manured their land. Lescarbot says the Armouchiquois, Virginia Indians, and others "enrich their fields with shells and fish." The implements they used in cultivating the ground are described as "wooden howes" and "spades made of hard wood."

"Florida Indians dig their ground with an instrument of wood fashioned like a broad mattock," "use hoes made of shoulder blades of animals fixed on staves," "use the shoulder blade of a deer or a tortoise shell, sharpened upon a stone and fastened to a stick, instead of a hoe;" "a piece of wood, 3 inches broad, bent at one end and fastened to a long handle sufficed them to free the land from weeds and turn it up lightly." Mention is also made of shells used as digging implements, and Moore and Cushing have found in Florida many large conchs that had served this purpose.

Such are some of the earlier statements in regard to the agricultural implements used by the Indians; however, certain stone implements have been found in vast numbers which are generally conceded to have been used in breaking the soil. Of these the most characteristic are the hoes and spades of the middle Mississippi valley.

Formerly the field work was generally done by women. Hariot (Hakluyt, Voy., III, 329, 1810) says, "The women, with short pickers or parers (because they use them sitting) of a foot long, and about 5 inches in breadth, do only break the upper part of the ground to raise up the weeds, grass, and old stubs or cornstalks with their roots." It was a general custom to burn over the ground before planting in order to free it from weeds and rubbish. In the forest region patches were cleared by girdling the trees, thus causing them to die, and afterward burning them down.

The aquatic plant (*Zizania aquatica*) generally known as "wild rice" has been for many generations one of the most important food producers of the Indian country about the Great Lakes and adjacent waters. The comparatively dense population in the wild-rice area and the physical well-being of the Indians there resident have been remarked by many writers. Henry in 1775 and Carver in 1776 record the fact that the great expeditions to the rivers of the west and the preservation of the "infant colonies" beyond the settled east would hardly have been possible without this cereal. The nomenclature of the wild-rice area is of importance, since Jenks concludes that in this

limited region of North America alone "more geographic names have been derived from wild-rice than from any other natural vegetal product throughout the whole continent." The plant itself is multi-nomial, no fewer than 60 synonyms in English, French, and the Indian tongues being cited by Jenks. The use of wild rice (which is mentioned rather late in the Jesuit Relations) seems to have been stimulated not a little by the pressure of the whites on the Indians, which forced them more and more into closer quarters in this region and cut off some of their resources, especially hunting. Wild rice is remembered in several Indian month-names and some interesting legends are connected with it. The Menominee tribe is so-called from the plant. Practically all that is known about the botany of wild rice, its production and food uses, its influence on Indian life and customs, and its use by white settlers, will be found in Dr. A. E. Jenks' monograph, "The Wild-Rice Gatherers of the Upper Lakes" (19th Report, Bureau of American Ethnology, 1900).

(Additional information relative to Indian agriculture, implements, products, etc., may be gleaned from The Handbook of American Indians North of Mexico, Bulletin 30, Bureau of American Ethnology).

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